Acacia veronica Maslin (Leguminosae: Mimosoideae), a new species of *Acacia* endemic in the Stirling Range, Western Australia

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Abstract

Maslin, B.R. *Acacia veronica* Maslin (Leguminosae: Mimosoideae), a new species endemic in the Stirling Range, Western Australia. Nuytsia 7(1): 43-47 (1989). A new species of *Acacia* section *Plurinerves*, *A. veronica* Maslin, is described and illustrated. Although its precise taxonomic affinities are unclear it seems in some ways related to *A. cyclops* A. Cunn. ex Don. *Acacia veronica* is the only species of *Acacia* known to be endemic in the Stirling Range.

Acacia veronica Maslin, sp. nov. (Figure 1).

Typus: 300 m N of Toolbrunup car park, Stirling Range National Park, Western Australia, 10 April 1974, A.*S. Weston* 9170 (holo: PERTH; iso: CANB, K, MEL, NY, PERTH).

[*Acacia dentifera* auct., non Benth.: G. Bentham, Fl. Austral. 2: 361(1864), *pro parte*, as to *J. Drummond* coll. 5, no. 7 (FI, G, P, PERTH).]

Frutex vel arbor plerumque 3-10 m alta. Ramuli glabri. Surculi novi resinosi. Phyllodia linearia ad linearia-elliptica, (6-8)9-15(20) cm longa, 3-8 mm lata, glabra, plerumque 3-nervia, nervo centrali maxime conspicuo. Racemi (1)2-6(8) mm longi, plerumque binati. Pedunculi 8-15 mm longi, glabri, resinosi. Capitula globulosa, 24-27-floribus. Flores 4-meri. Calyx gamosepalus. Legumina linearia, ad 11 cm longa, 5-5.5 mm lata. Semina in legumine longitudinalia, 5.5-6 mm longa, arillo albo.

Shrub or *tree* 3-10 m tall, sometimes smaller, main trunks c. 10 cm or more d.b.h., canopy often dense. *Bark* grey or greenish grey, finely fissured at base of trunks, otherwise smooth. *Branchlets* glabrous, terete, angled towards apices, finely ribbed, ribs yellow to light brown. *New shoots* resinous, aromatic (fragrance of friar's balsam). *Stipules* inconspicuous, 0.5 mm long, triangular, caducous. *Phyllodes* linear to linear-elliptic, narrowed at both ends, (6-8)9-15(20) cm long, 3-8 mm wide, l:w = 15-30(60), thinly coriaceous, spreading to erect, usually shallowly incurved, sometimes

Figure 1. Acacia veronica. A - Portion of branch. B - Flower. C - Bracteole. D - Phyllode showing nervature, D^1 central segment of phyllode, D^2 lower segment of phyllode (p - pulvinus, g - gland, m - midrib, s - secondary longitudinal nerves). E - Legume. F - Seed. A drawn from *A.S Weston* 9170; B-D from *G.J. Keighery* 4978; E-F from *B.R. Maslin* 4013.

straight, glabrous, dark green, slightly shiny when fresh; commonly 3 longitudinal *nerves* arising from near base of phyllode, the central nerve (midrib) the most pronounced, secondary nerves trending longitudinally and sparingly anastomosing; *apices* acute, straight or sub-uncinate, apical point callose and brown; *pulvinus* 1.5-2 mm long, transversely wrinkled when dry, ± channelled adaxially (at least when dry). *Gland* inconspicuous, situated on upper margin of phyllode at distal end of pulvinus or to c. 1 mm above it. *Racemes* (1)2-6(8) mm long with commonly two peduncles inserted towards the end of the raceme axis; *raceme axis* resinous, glabrous, base ebracteate, apex usually terminated by a dormant bud enveloped by resin, occasionally the bud growing out as a vegetative shoot or sometimes replaced by a peduncle. *Peduncles* 8-15 mm long, glabrous, resinous, papillose or verruculose, ± smooth in fruit; basal peduncular bract ± caducous, solitary, triangular, shallowly concave at base, 1-1.5 mm long, light brown. Flower-heads globular, 24-27 -flowered, to 12 mm diam. at anthesis (when dry), white to cream. *Bracteoles* spathulate, equalling calyx in length, glabrous, apices thickened and abaxially verruculose or papillose. *Flowers* 4-merous, resinous, glabrous. *Calyx* 2/5-3/5 length of corolla, gamosepalous, divided for c. 1/4 its length into triangular-oblong lobes which are slightly keeled abaxially. *Petals* 2-2.5 mm long, superficially nerveless. *Legumes* linear, to 11 cm long, 5-5.5 mm wide, up to 11 seeded, thinly coriaceous-crustaceous, ± straight, not or scarcely constricted between the seeds and moderately raised over them, glabrous, brown to grey-brown, marginal nerve narrow. *Seeds* longitudinal in the legume, oblongoid, 5.5-6 mm long, 2.7 mm wide, dark brown, moderately shiny; *pleurogram* obscure, open at hilar end, 3.5-4 mm long, 1-1.3 mm wide; *funicle* straight, c. 3 mm long, expanded into a thickened, terminal, white (light brown when dry) aril.

Other specimens examined. WESTERN AUSTRALIA: At back of Mt Hassell, Stirling Range, *A.M. Ashby* 4479 (PERTH); [Mt] Toolbrunup, on the climbing track from SE, *J.S. Beard* 7441 (PERTH); N of [Mt] Toolbrunup, Stirling Range National Park, *J.S. Beard* 7660 (PERTH); cultivated at Muchamulla, Moore River, 24 June 1982, *M.I. Blackwell* s.n. (AD, NY, PERTH); 10 km from Chester Pass Road on Stirling Range Scenic Drive, *R.J. Cumming* 947 (PERTH); 21 km along Stirling Range Scenic Drive from Red Gum Pass Road, *R.J. Cumming* 1000 (MEL, PERTH); 4.4 km from Chester Pass Road on Stirling Range Scenic Drive, *R.J. Cumming* 1013 (PERTH); Mt Toolbrunup, Stirling Range, *A.R. Fairall* 2515 (PERTH); cultivated in Ashby's garden from Stirling Range seed, *F.M. Hilton* 900 (PERTH); Mt Trio car park, Stirling Range, *G.J. Keighery* 3382 (PERTH) and 3510 (PERTH); Summit ridgeline of Wedge Hill, *G.J. Keighery* 4872 (PERTH); Gullies below Mt Hassell, Stirling Range, *G.J. Keighery* 4978 (CANB, K, PERTH); Near Mt Hassell, Stirling Range, *B.R. Maslin* 3744 (PERTH) and 4013 (PERTH); cultivated in Ken Newbey's Arboretum, Ongerup, *K.R. Newbey* 3689 (PERTH); Mt Talyuberlup, Stirling Range, anno 1973, *K.R. Newbey* s.n. (PERTH); Mt Toolbrunup, Stirling Range National Park, *F.A. Spratt* 10 (PERTH) and *A.S. Weston* 8247 (PERTH); Top of Mt Barnett, Stirling Range, *A.S. Weston* 9147 (PERTH).

Distribution. South-west Western Australia at the western extremity of the Eyre Botanical District (1: 250,000 map, I50-11). Endemic in the Stirling Range National Park, c. 80 km N of Albany. *Acacia veronica* is the only species of *Acacia* known to be restricted to the Stirling Range.

Habitat. Gullies along watercourses in Jarrah-Marri or Wandoo forest or woodland. Also in sheltered sites near summits of some high peaks.

Flowering period. March-September.

Fruiting period. Legumes with mature seeds have been collected in December. The species is a heavy seeder.

Variation. Specimens from near summits of some high peaks may reach only 1.5 m tall and have shorter than normal phyllodes (6-8 cm long).

Affinities. On account of its globular flower-heads and its multi-nerved phyllodes *A. veronica* is referred to *Acacia* section *Plurinerves* (Benth.) Maiden & Betche. However, because the phyllode midrib is more pronounced than the other 1 or 2 longitudinal nerves, *A. veronica* can easily be mistaken for a species of *Acacia* section *Phyllodineae* DC. Indeed, this is what Bentham (1864, 361) did by including under *A. dentifera* Benth. the specimen, J. Drummond coll. 5, no. 7. *Acacia dentifera* is distinguished from *A. veronica* by many characters including the following: it is a non-resinous, non-aromatic shrub with golden heads, 5-merous flowers, ± terete legumes and prominently 1-nerved phyllodes (with no secondary longitudinal nerves).

The precise taxonomic affinities of the new species are not clear. Based on inflorescence structure and phyllode nervature *A. veronica* appears to have some affinities with *A. cyclops* A. Cunn. ex Don. This species is widespread in coastal and near-coastal habitats in Western Australia and South Australia (Maslin & Pedley 1982) and is readily distinguished from *A. veronica* in the following ways: branchlets, peduncles and flower-heads not resinous; phyllodes 3-5-nerved (nerves ± equally prominent), 4-9.5 cm long, 6-15 mm wide; flowers 5-merous; flower-heads light golden; legumes 8-12 mm wide; funicle thick and prominent, red or yellowish orange, encircling the seed. Gum chemistry studies by Anderson et al. (1984) lend support to a relationship between *A. veronica** and *A. cyclops*. However, somewhat surprisingly, Anderson's results suggest that the following species are biochemically more closely related to *A. veronica* than the new species is to *A. cyclops: A. implexa* Benth. (*Acacia* section *Plurinerves*), *A. saligna* (Labill.) H. Wendl. (*Acacia* section *Phyllodineae*), *A. longifolia* (Andr.) Willd. and *A. maidenii* F. Muell. (both *Acacia* section *Juliflorae* (Benth.) Maiden & Betche). Using existing classifications of *Acacia* this is an unlikely alliance of taxa. However, a re-assessment of the classification of *Acacia* is long overdue, and it is not possible to predict how species will be grouped in a more natural classification of the genus.

Acacia veronica is possibly distantly related to some species occurring in eastern Australia. For example, *A. subporosa* F. Muell. (New South Wales, Victoria) is similar in phyllode shape, size and nervature, flower-head shape, and in carpological features. This species differs markedly from *A. veronica* in its puncticulate phyllodes, 5-merous flowers, and non-racemose inflorescences. *Acacia baeuerlenii* Maiden & R.T. Baker (New South Wales, Queensland) resembles *A. veronica* in its large, globular, white flower-heads arranged in short racemes (raceme axis with a dormant apical bud, peduncles with a single basal bract) but differs in many other ways, e.g. hairy branchlets, racemes and legumes, 5-merous flowers, broader phyllodes with more numerous nerves (see Pedley 1978, 208).

Conservation status. 2RC using the criteria of Leigh et al. (1981).

Cultivation. In cultivation at Moore River (c. 80 km N of Perth) the species reached 1.5 m high and flowered in its first year. Also successfully cultivated in Perth and Adelaide.

Etymology. Named in honour of my wife, Veronica. The epithet "*veronica*" is used here deliberately as a noun in apposition, thus requiring no change by the addition of a case ending.

Acknowledgements

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* In this work *A. veronica* was called *Acacia* 'P31' and, upon my advice, referred to *Acacia* sec Phyllodineae.

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